

IN THE CLAIMS:

Please amend claims 1, 12, 14, and 33, and add claims 34-39 as follows:

1. (currently amended) An optical disc recording apparatus for forming an image on an optical disc by a laser beam, comprising:

an optical pickup which applies a laser beam of substantially constant power to [[an]] the optical disc to form the image;

a rotating section which rotates the optical disc at a substantially constant speed;

a feeding section which moves the optical pickup by a movement distance in a radial direction of the optical disc;

a detecting section which detects a radial position of the optical pickup with respect to the optical disc; and

a movement distance controlling section which changes the movement distance set by the feeding section in accordance with the radial position of the optical pickup detected by the detecting section.

2. (previously presented) The optical disc recording apparatus according to claim 1, wherein a rotation number of the optical disc rotated by the rotating section is controlled by a rotation controlling section to be substantially constant.

3. (original) The optical disc recording apparatus according to claim 1, wherein the power of the laser beam is controlled by a laser power controlling section to be substantially constant.

4. (original) The optical disc recording apparatus according to claim 1, wherein the feeding section moves the optical pickup each time when the optical disc is rotated once by the rotating section.

5. (previously presented) The optical disc recording apparatus according to claim 1, wherein the movement distance controlling section changes the movement distance set by the feeding section to be reduced in a stepwise manner as the radial position of the optical pickup is moved from an inner peripheral side of the optical disc toward an outer peripheral side.

6. (previously presented) The optical disc recording apparatus according to claim 1, further including a storage section which stores feed management information for forming an image of a density which is uniform over a substantially whole area of the optical disc, the feed management information including radial positions of the optical pickup and corresponding movement distances for the optical pickup,

wherein the movement distance controlling section obtains the movement distance based on the radial position of the optical pickup that is detected by said detecting section, and a corresponding movement distance in the feed management information.

7. (original) The optical disc recording apparatus according to claim 1, wherein the optical disc recording apparatus forms an image on the optical disc in accordance with image data with using the optical pickup, the rotating section, the feeding section, the detecting section and the movement distance controlling section.

Claims 8 – 11 (canceled).

12. (currently amended) A method of forming an image on an optical disc comprising steps of:

rotating the optical disc at substantially constant speed;

applying a laser beam of substantially constant power to the optical disc by an optical pickup to form the image;

moving the optical pickup by a movement distance in a radial direction of the optical disc; and

changing the movement distance in accordance with the radial position of the optical pickup on the optical disc.

Claim 13 (canceled).

14. (currently amended) An optical disc including a heat sensitive layer in which an image is formed by discoloring the heat-sensitive layer, the image being formed by the method comprising steps of:

rotating the optical disc at substantially constant speed;

applying a laser beam of substantially constant power to the optical disc by an optical pickup to form the image;

moving the optical pickup by a movement distance in a radial direction of the optical disc; and

changing the movement distance in accordance with the radial position of the optical pickup on the optical disc.

Claim 15 (canceled).

16. (previously presented) The method of claim 12, wherein a number of rotations the optical disk is rotated is controlled by a rotation controlling section to be substantially constant.

17. (previously presented) The method of claim 12, wherein the power of the laser beam is controlled by a laser power controlling section to be substantially constant.

18. (previously presented) The method of claim 12, wherein the moving of the optical pickup by the movement distance occurs each time when the optical disk is rotated once by a rotating section.

19. (previously presented) The method of claim 12, wherein the changing in the movement distance is reduced in a stepwise manner as the radial position of the optical pickup is moved from an inner peripheral side of the optical disc toward an outer peripheral side.

20. (previously presented) The method of claim 12, further including storing feed management information which is utilized for forming an image of a density which is uniform over a substantially whole area of the optical disc, the feed management information including radial positions of the optical pickup and corresponding movement distances for the optical pickup, and

obtaining the movement distance of the optical pickup based on the radial position of the optical pickup detected by a detecting section and a corresponding movement distance in the feed management information.

21. (previously presented) The method of claim 12, further including forming an image on the optical disc in accordance with image data.

22. (previously presented) The optical disc of claim 14, wherein a number of rotations the optical disk is rotated is controlled by a rotation controlling section to be substantially constant.

23. (previously presented) The optical disc of claim 14, wherein the power of the laser beam is controlled by a laser power controlling section to be substantially constant.

24. (previously presented) The optical disc of claim 14, wherein the moving of the optical pickup by the movement distance occurs each time when the optical disk is rotated once by a rotating section.

25. (previously presented) The optical disc of claim 14, wherein the changing in the movement distance is further reduced in a stepwise manner as the radial position of the optical

pickup is further moved from an inner peripheral side of the optical disc toward an outer peripheral side.

26. (previously presented) The optical disc of claim 14, further including storing feed management information which is utilized for forming an image of a density which is uniform over a substantially whole area of the optical disc, the feed management information including radial positions of the optical pickup and corresponding movement distances for the optical pickup, and

obtaining the movement distance of the optical pickup based on the radial position of the optical pickup detected by a detecting section and a corresponding movement distance in the feed management information.

27. (previously presented) The optical disc of claim 14, further including forming an image on the optical disc in accordance with image data.

28. (previously presented) The optical disc recording apparatus of claim 1, wherein the movement distance of the optical pickup is the movement distance of the laser beam in a disk radial direction.

29. (previously presented) The method of claim 12, wherein the movement distance of the optical pickup is the movement distance of the laser beam in a disk radial direction.

30. (previously presented) The optical disc of claim 14, the movement distance of the optical pickup is the movement distance of the laser beam in a disk radial direction.

31. (previously presented) The optical disc recording apparatus of claim 1, wherein the movement distance is set according to a line width of the optical disc.

32. (previously presented) The method of claim 12, wherein the movement distance is set according to a line width of the optical disc.

33. (currently amended) The optical disc of claim 14, wherein the movement distance ~~set movement distance~~ is set according to a line width of the optical disc.

34. (new) The optical disc recording apparatus according to claim 1 further including a memory for storing image data defining the image to be formed on the optical disc, wherein the detecting section detects a radial position of the optical pickup with respect to the optical disc and a circumferential position of the optical pickup with respect to the optical disc, and

the image data corresponding to the detected radial position and the circumferential position is read out from the memory and transferred to the optical pickup to control on/off of the laser beam.

35. (new) The method according to claim 12, further comprising:
storing, in a memory, image data defining the image to be formed on the optical disc,
detecting a radial position of the optical pickup with respect to the optical disc and a circumferential position of the optical pickup with respect to the optical disc, and
reading out the image data corresponding to the detected radial position and the circumferential position from the memory; and
transferring the read-out image data to the optical pickup to control on/off of the laser beam.

36. (new) The method according to claim 12, further including:
storing, in a memory, image data defining the image to be formed on the optical disc,
detecting a radial position of the optical pickup with respect to the optical disc and a circumferential position of the optical pickup with respect to the optical disc, and

reading out the image data corresponding to the detected radial position and the circumferential position from the memory; and
transferring the read-out image data to the optical pickup to control on/off of the laser beam.

37. (new) An optical disc recording apparatus, comprising:
an optical pickup with applies a laser beam of substantially constant power to an optical disc;
a rotating section which rotates the optical disc at a substantially constant speed;
a feeding section which moves the optical pickup by a movement distance in a radial direction of the optical disc;
a detecting section which detects a radial position of the optical pickup with respect to the optical disc; and
a movement distance controlling section which changes the movement distance set by the feeding section in accordance with the radial position of the optical pickup detected by the detecting section,

wherein the movement distance controlling section changes the movement distance set by the feeding section to be reduced in a stepwise manner as the radial position of the optical pickup is moved from an inner peripheral side of the optical disc toward an outer peripheral side.

38. (new) An optical disc recording apparatus, comprising:
an optical pickup which applies a laser beam of substantially constant power to an optical disc;
a rotating section which rotates the optical disc at a substantially constant speed;

a feeding section which specifies a movement distance of the optical pickup in a radial direction;

a detecting section which detects a radial position of the optical pickup with respect to the optical disc; and

a movement distance controlling section which changes the movement distance specified by the feeding section in accordance with the radial position of the optical pickup detected by the detecting section, wherein the movement distance specified by the feeding section is correlated in advance to a predetermined radial position of the optical pickup.

39. (new) An optical disc recording apparatus for forming an image on an optical disc by a laser beam, comprising:

an optical pickup which applies a laser beam of substantially constant power to a label face of the optical disc to form the image on the label face, wherein the label face of the optical disc does not include tracks;

a rotating section which rotates the optical disc at a substantially constant speed;

a feeding section which moves the optical pickup by a movement distance in a radial direction of the optical disc;

a detecting section which detects a radial position of the optical pickup with respect to the optical disc; and

a movement distance controlling section which changes the movement distance set by the feeding section in accordance with the radial position of the optical pickup detected by the detecting section.

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